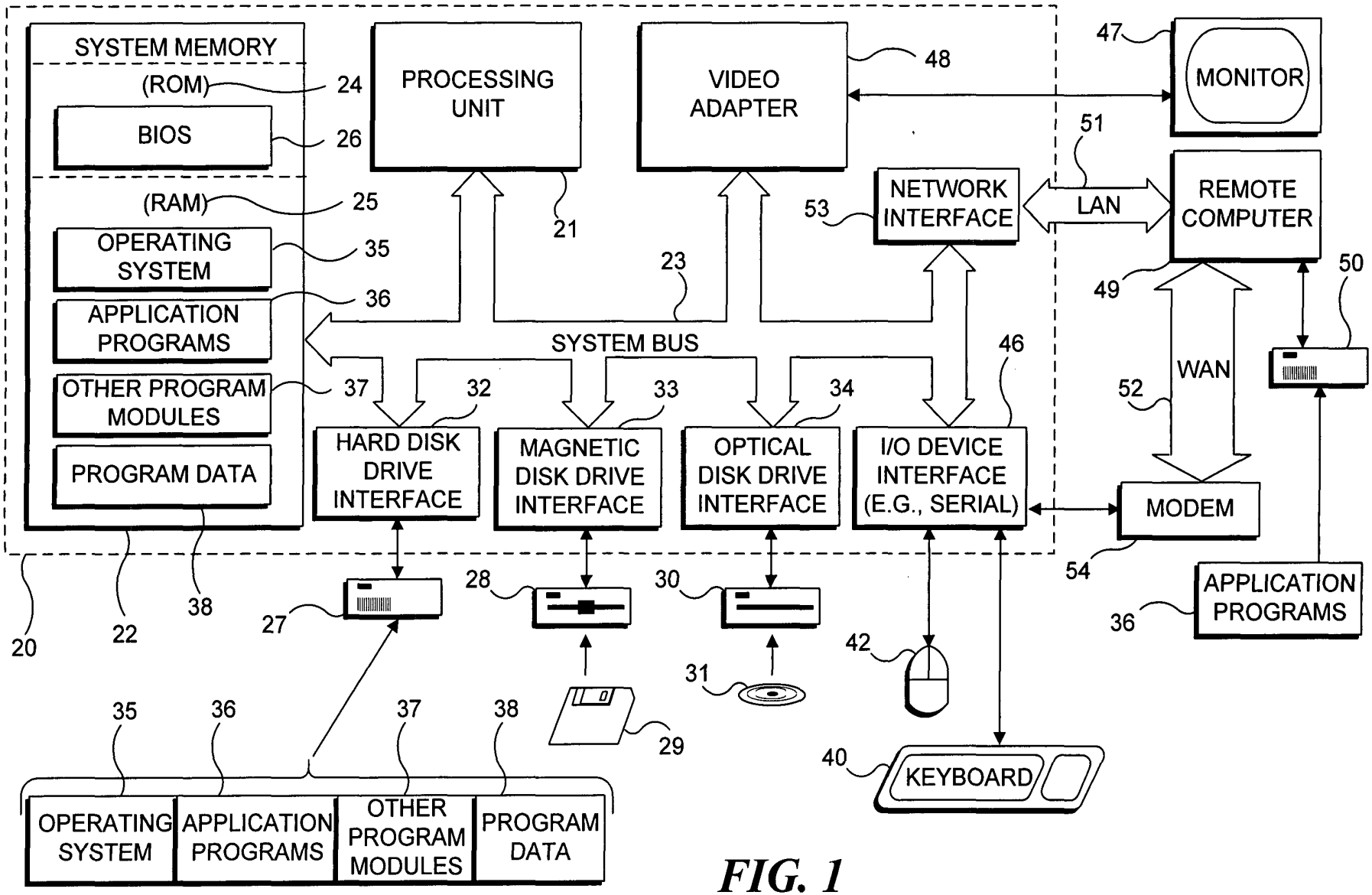
SYSTEM MEMORY
(ROM)
24
BIOS
26
(RAM)
25
OPERATING SYSTEM
35
APPLICATION PROGRAMS
36
OTHER PROGRAM MODULES
37
PROGRAM DATA
38
PROCESSING UNIT
21
VIDEO ADAPTER
48
47
MONITOR
51
NETWORK INTERFACE
53
LAN
REMOTE COMPUTER
49
50
23
SYSTEM BUS
46
WAN
52
HARD DISK DRIVE INTERFACE
32
MAGNETIC DISK DRIVE INTERFACE
33
OPTICAL DISK DRIVE INTERFACE
34
I/O DEVICE INTERFACE (E.G., SERIAL)
MODEM
54
APPLICATION PROGRAMS
36
20
22
27
28
30
31
29
42
40
KEYBOARD
35
36
37
38
OPERATING SYSTEM
APPLICATION PROGRAMS
OTHER PROGRAM MODULES
PROGRAM DATA

FIG. 1

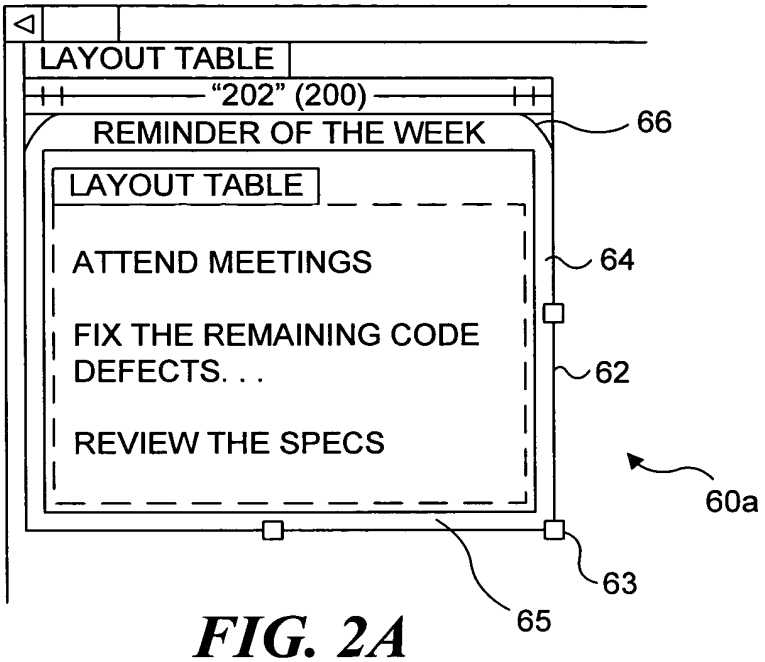

FIG. 2A
(PRIOR ART)

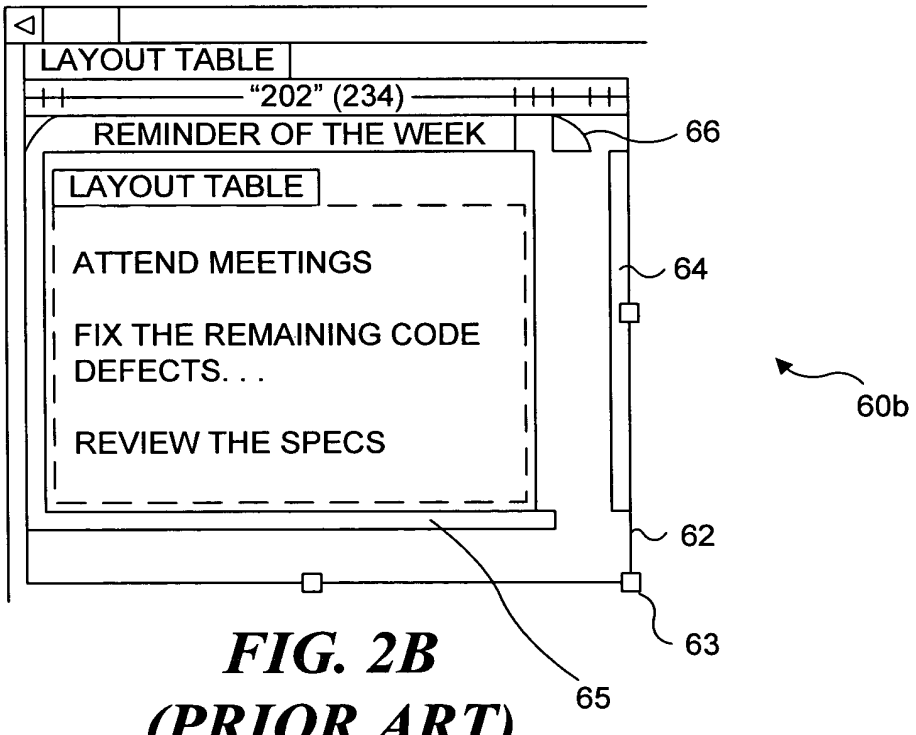

FIG. 2B
(PRIOR ART)

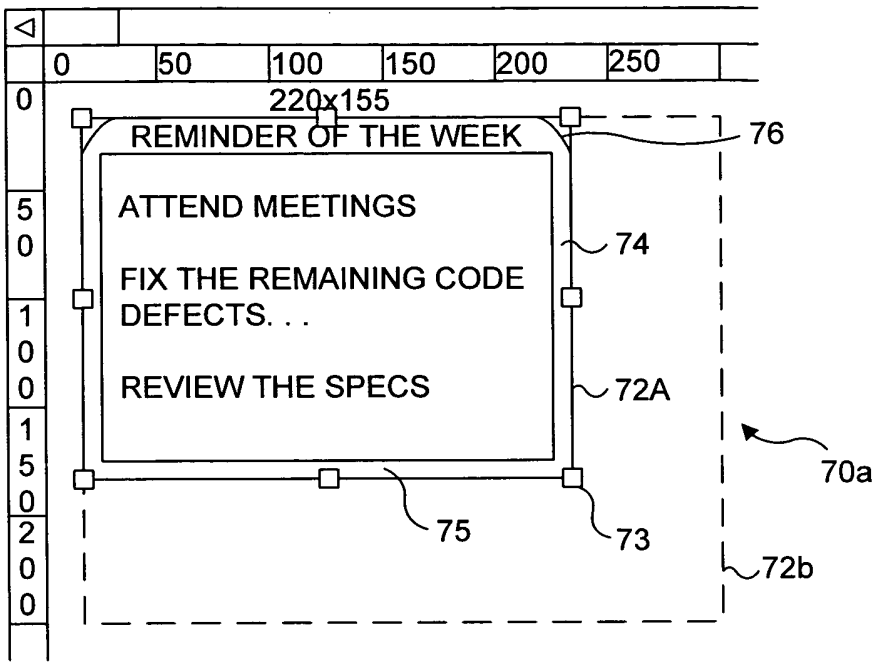
0
50
100
150
200
250
220x155
REMINDER OF THE WEEK
ATTEND MEETINGS
FIX THE REMAINING CODE DEFECTS. . .
REVIEW THE SPECS
76
74
72A
70a
75
73
72b

FIG. 3A

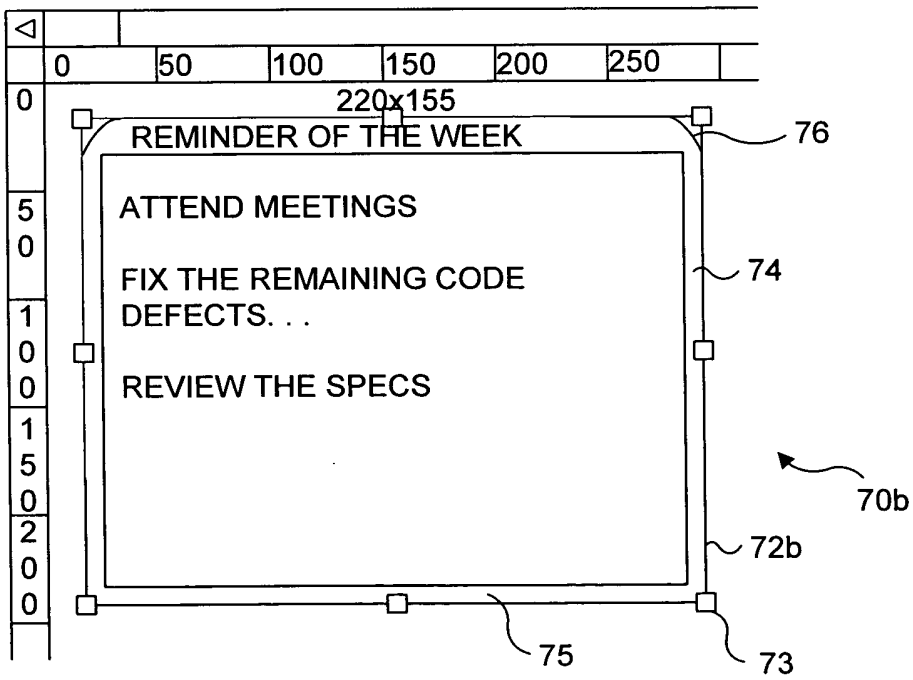
0
50
100
150
200
250
220x155
REMINDER OF THE WEEK
ATTEND MEETINGS
FIX THE REMAINING CODE DEFECTS. . .
REVIEW THE SPECS
76
74
70b
72b
75
73

FIG. 3B

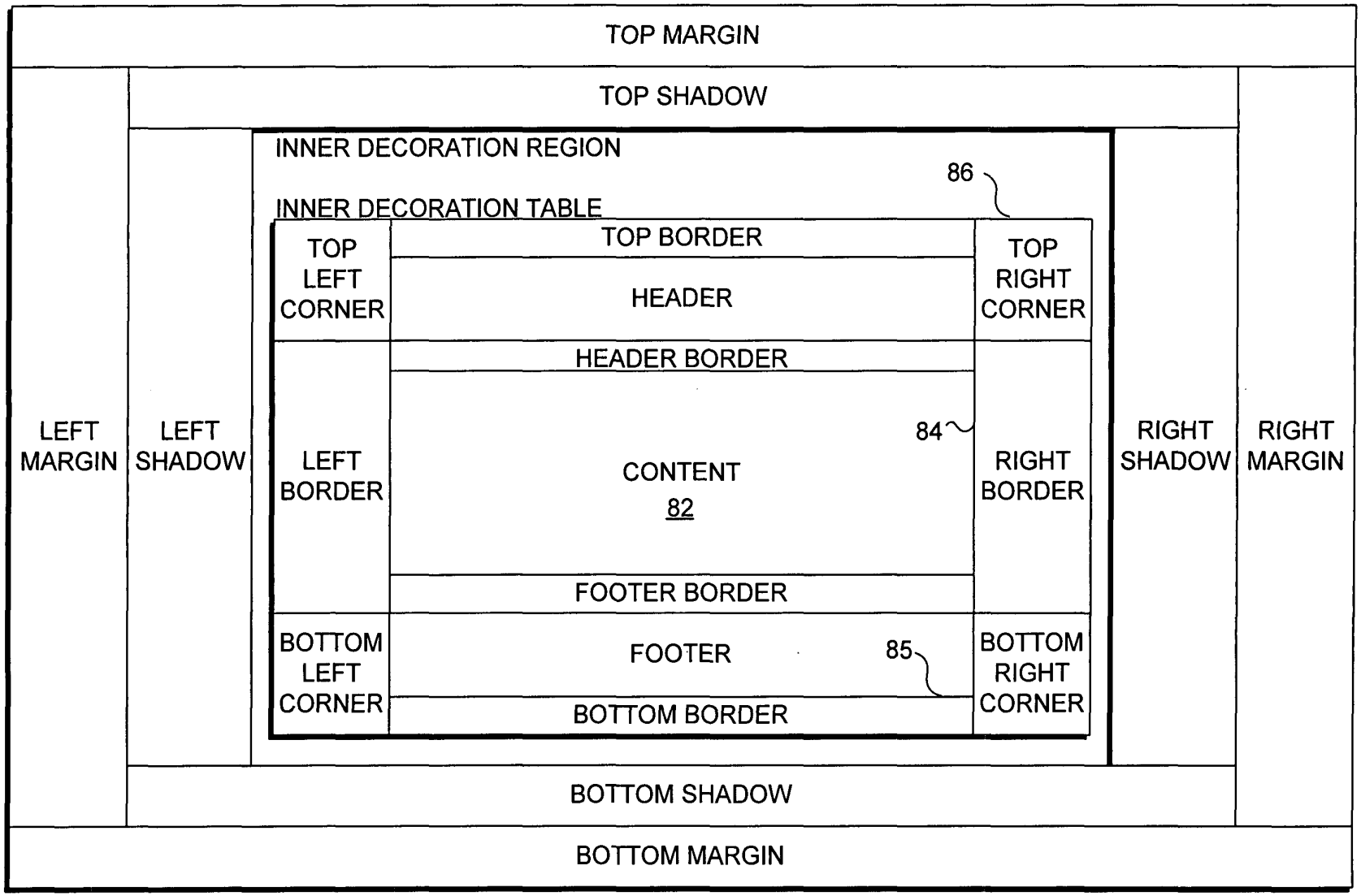
TOP MARGIN
TOP SHADOW
INNER DECORATION REGION
86
INNER DECORATION TABLE
TOP BORDER
TOP LEFT CORNER
HEADER
TOP RIGHT CORNER
HEADER BORDER
84
LEFT MARGIN
LEFT SHADOW
LEFT BORDER
CONTENT
82
RIGHT BORDER
RIGHT SHADOW
RIGHT MARGIN
FOOTER BORDER
BOTTOM LEFT CORNER
FOOTER
85
BOTTOM RIGHT CORNER
BOTTOM BORDER
BOTTOM SHADOW
BOTTOM MARGIN

FIG. 4

80

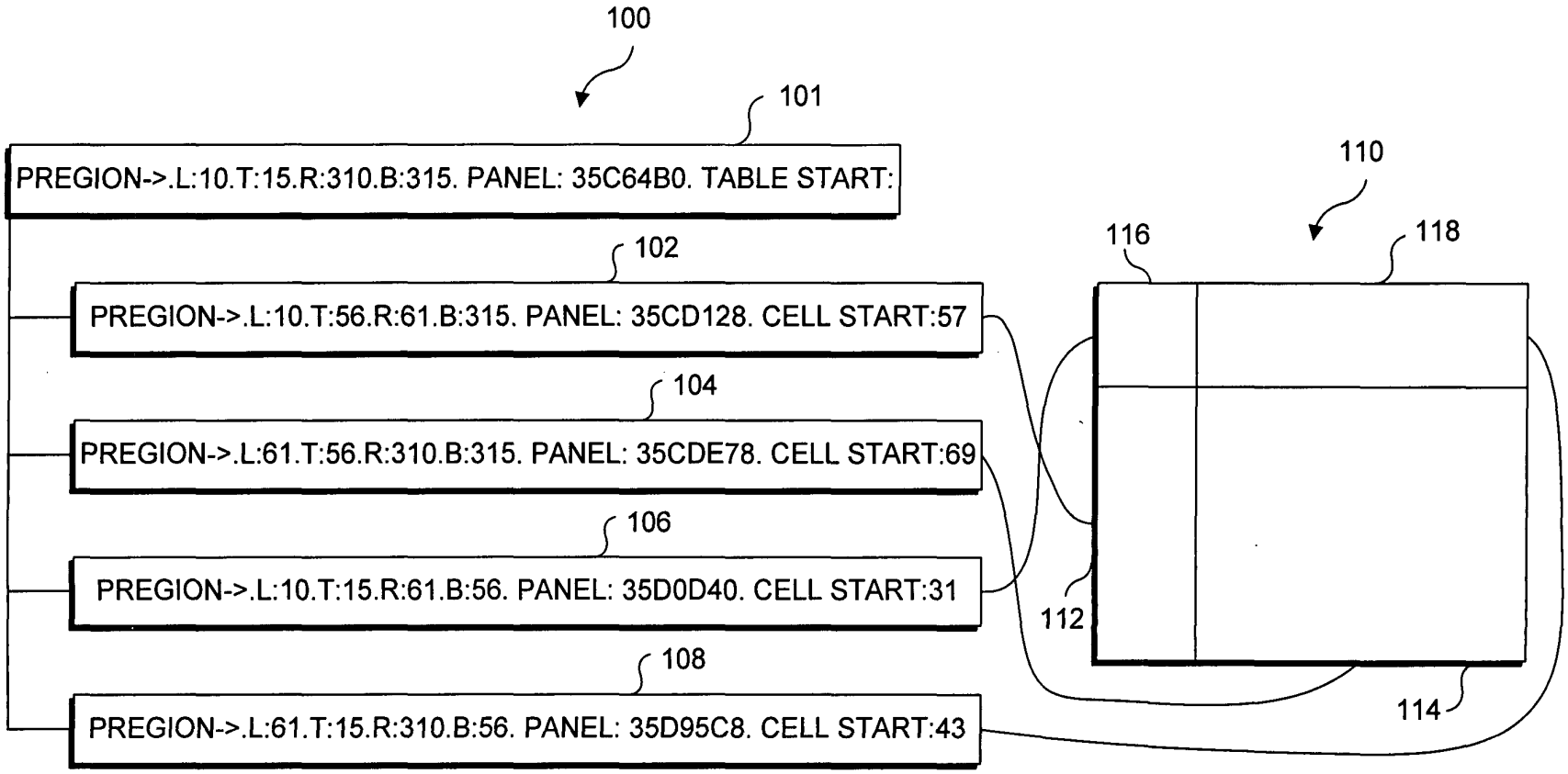
100
101
PREGION->.L:10.T:15.R:310.B:315. PANEL: 35C64B0. TABLE START:
102
PREGION->.L:10.T:56.R:61.B:315. PANEL: 35CD128. CELL START:57
104
PREGION->.L:61.T:56.R:310.B:315. PANEL: 35CDE78. CELL START:69
106
PREGION->.L:10.T:15.R:61.B:56. PANEL: 35D0D40. CELL START:31
108
PREGION->.L:61.T:15.R:310.B:56. PANEL: 35D95C8. CELL START:43
110
116
118
112
114

FIG. 5

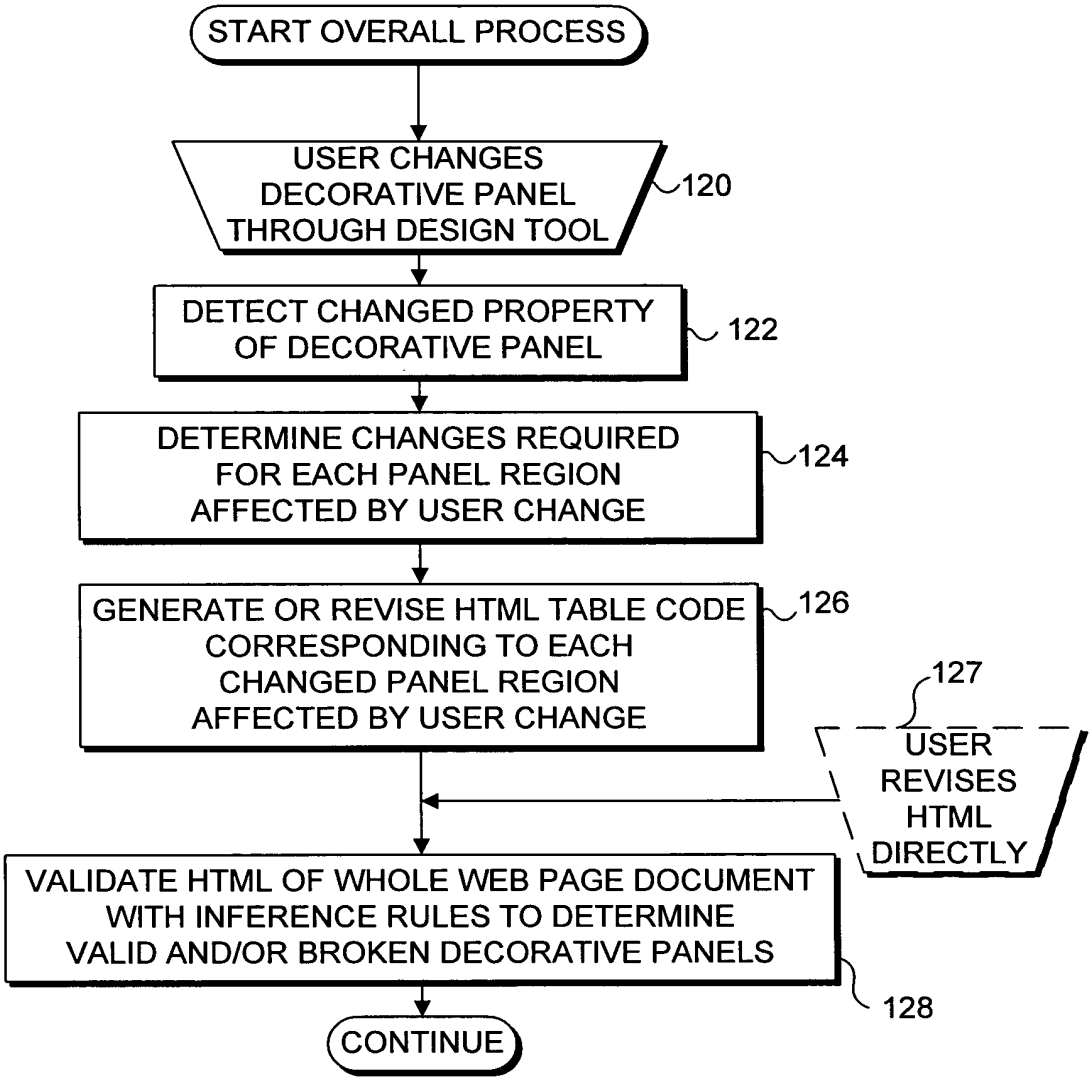
START OVERALL PROCESS
USER CHANGES DECORATIVE PANEL THROUGH DESIGN TOOL
120
DETECT CHANGED PROPERTY OF DECORATIVE PANEL
122
DETERMINE CHANGES REQUIRED FOR EACH PANEL REGION AFFECTED BY USER CHANGE
124
GENERATE OR REVISE HTML TABLE CODE CORRESPONDING TO EACH CHANGED PANEL REGION AFFECTED BY USER CHANGE
126
127
USER REVISES HTML DIRECTLY
VALIDATE HTML OF WHOLE WEB PAGE DOCUMENT WITH INFERENCE RULES TO DETERMINE VALID AND/OR BROKEN DECORATIVE PANELS
128
CONTINUE

FIG. 6

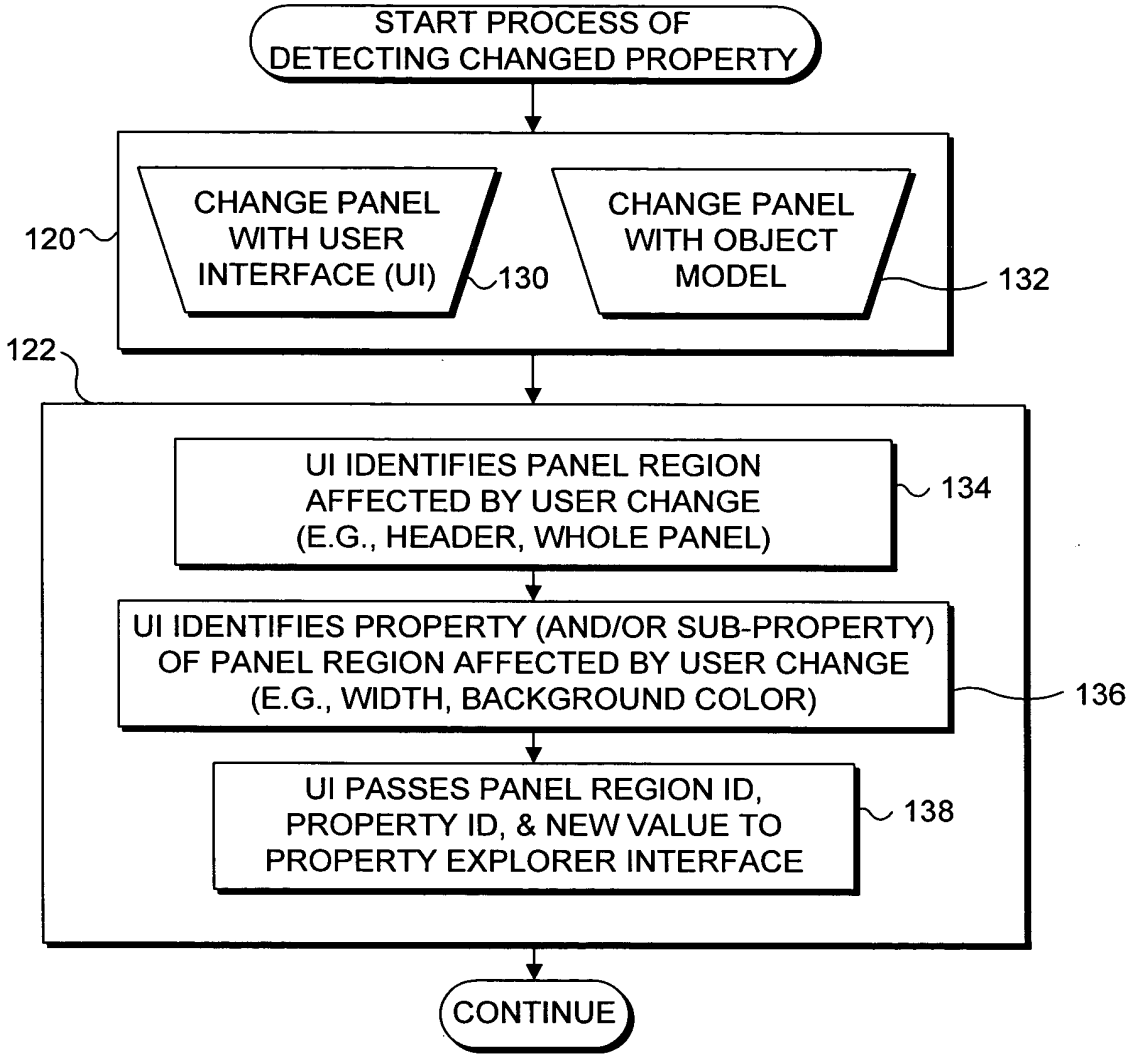
START PROCESS OF DETECTING CHANGED PROPERTY
120
CHANGE PANEL WITH USER INTERFACE (UI)
130
CHANGE PANEL WITH OBJECT MODEL
132
122
UI IDENTIFIES PANEL REGION AFFECTED BY USER CHANGE (E.G., HEADER, WHOLE PANEL)
134
UI IDENTIFIES PROPERTY (AND/OR SUB-PROPERTY) OF PANEL REGION AFFECTED BY USER CHANGE (E.G., WIDTH, BACKGROUND COLOR)
136
UI PASSES PANEL REGION ID, PROPERTY ID, & NEW VALUE TO PROPERTY EXPLORER INTERFACE
138
CONTINUE

FIG. 7

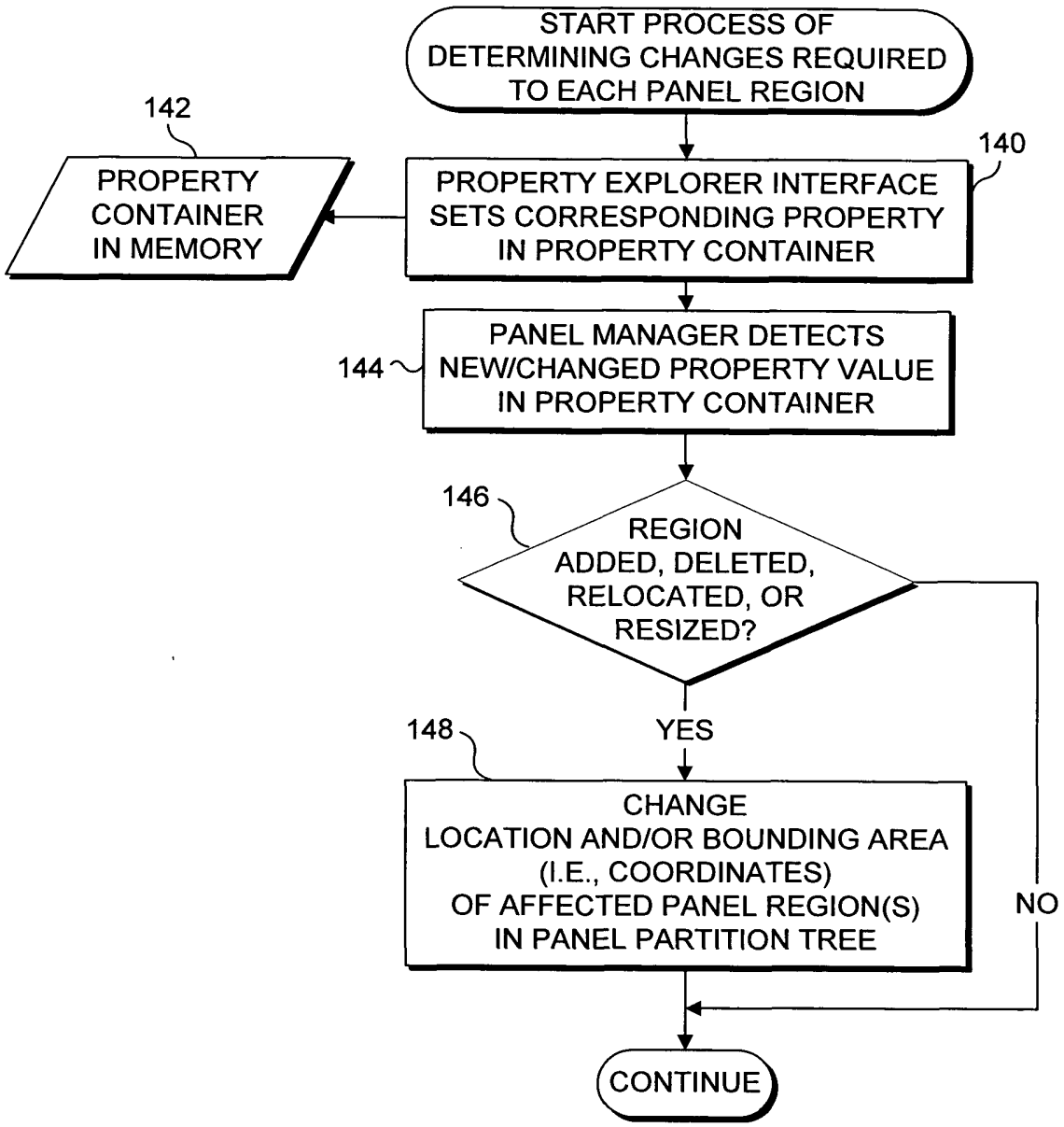
START PROCESS OF DETERMINING CHANGES REQUIRED TO EACH PANEL REGION
142
PROPERTY CONTAINER IN MEMORY
140
PROPERTY EXPLORER INTERFACE SETS CORRESPONDING PROPERTY IN PROPERTY CONTAINER
144
PANEL MANAGER DETECTS NEW/CHANGED PROPERTY VALUE IN PROPERTY CONTAINER
146
REGION ADDED, DELETED, RELOCATED, OR RESIZED?
YES
NO
148
CHANGE LOCATION AND/OR BOUNDING AREA (I.E., COORDINATES) OF AFFECTED PANEL REGION(S) IN PANEL PARTITION TREE
CONTINUE

FIG. 8

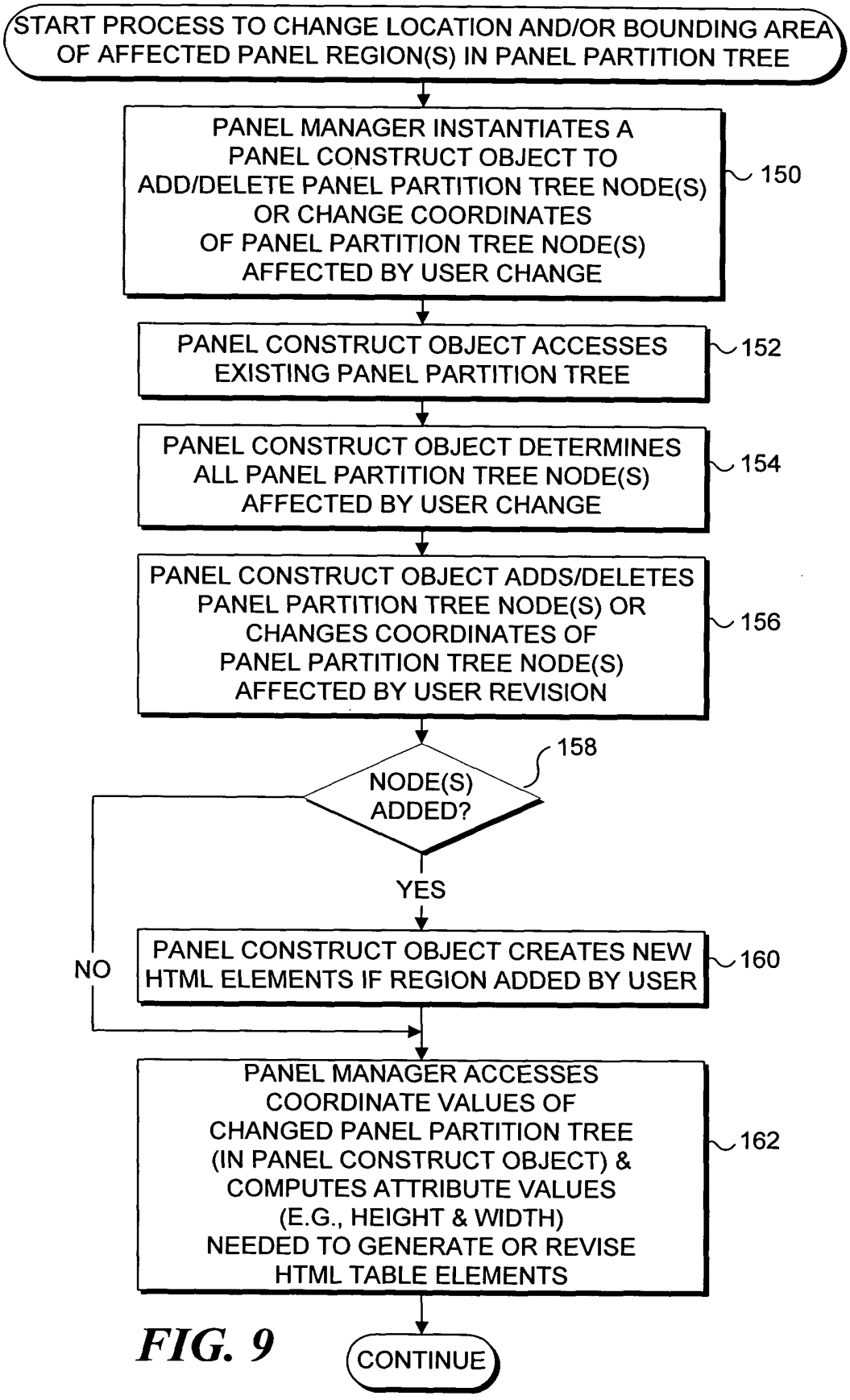
START PROCESS TO CHANGE LOCATION AND/OR BOUNDING AREA OF AFFECTED PANEL REGION(S) IN PANEL PARTITION TREE
PANEL MANAGER INSTANTIATES A PANEL CONSTRUCT OBJECT TO ADD/DELETE PANEL PARTITION TREE NODE(S) OR CHANGE COORDINATES OF PANEL PARTITION TREE NODE(S) AFFECTED BY USER CHANGE
150
PANEL CONSTRUCT OBJECT ACCESSES EXISTING PANEL PARTITION TREE
152
PANEL CONSTRUCT OBJECT DETERMINES ALL PANEL PARTITION TREE NODE(S) AFFECTED BY USER CHANGE
154
PANEL CONSTRUCT OBJECT ADDS/DELETES PANEL PARTITION TREE NODE(S) OR CHANGES COORDINATES OF PANEL PARTITION TREE NODE(S) AFFECTED BY USER REVISION
156
158
NODE(S) ADDED?
YES
NO
PANEL CONSTRUCT OBJECT CREATES NEW HTML ELEMENTS IF REGION ADDED BY USER
160
PANEL MANAGER ACCESSES COORDINATE VALUES OF CHANGED PANEL PARTITION TREE (IN PANEL CONSTRUCT OBJECT) & COMPUTES ATTRIBUTE VALUES (E.G., HEIGHT & WIDTH) NEEDED TO GENERATE OR REVISE HTML TABLE ELEMENTS
162
CONTINUE

FIG. 9

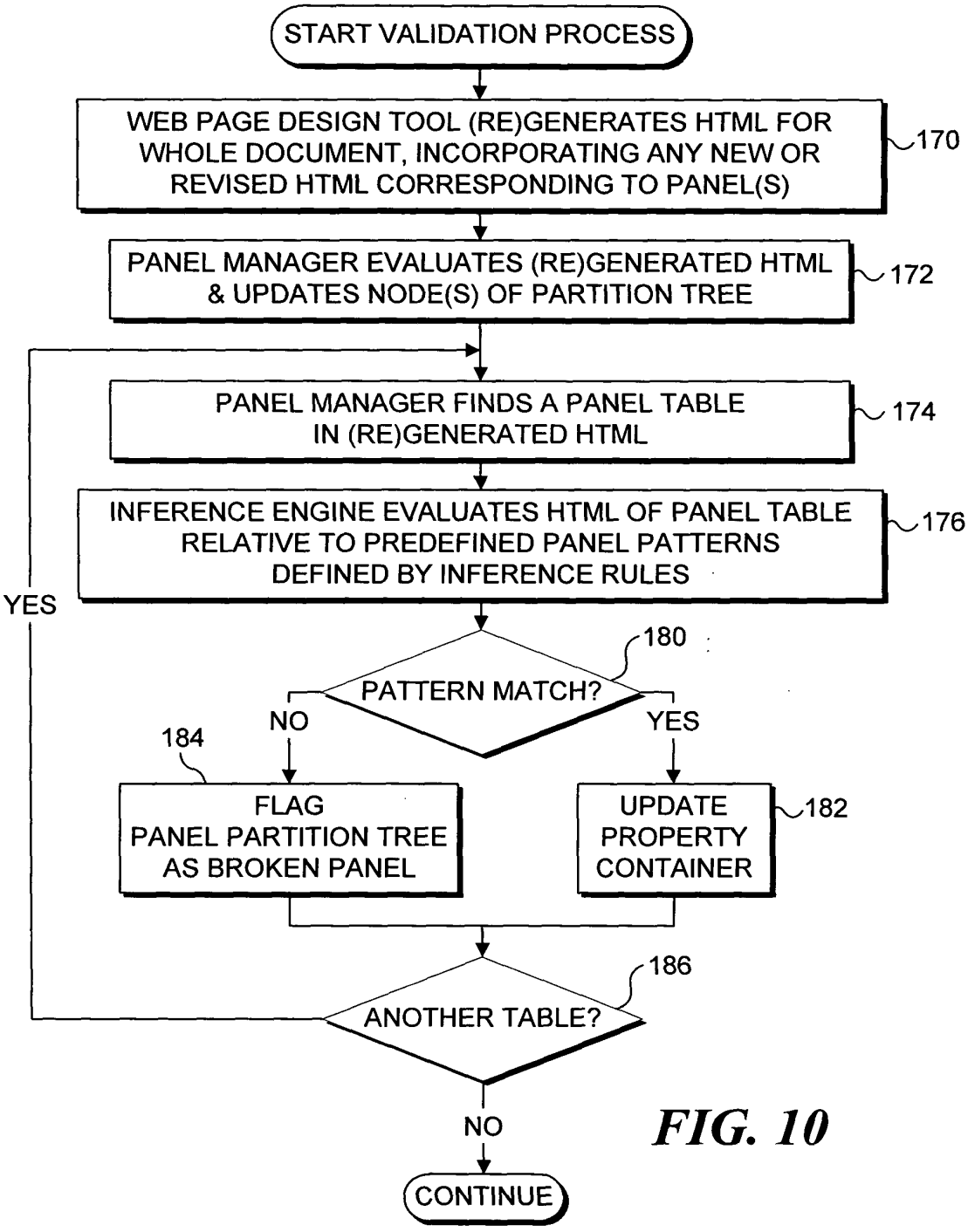
START VALIDATION PROCESS
WEB PAGE DESIGN TOOL (RE)GENERATES HTML FOR WHOLE DOCUMENT, INCORPORATING ANY NEW OR REVISED HTML CORRESPONDING TO PANEL(S)
170
PANEL MANAGER EVALUATES (RE)GENERATED HTML & UPDATES NODE(S) OF PARTITION TREE
172
PANEL MANAGER FINDS A PANEL TABLE IN (RE)GENERATED HTML
174
INFERENCE ENGINE EVALUATES HTML OF PANEL TABLE RELATIVE TO PREDEFINED PANEL PATTERNS DEFINED BY INFERENCE RULES
176
YES
180
PATTERN MATCH?
NO
YES
184
FLAG PANEL PARTITION TREE AS BROKEN PANEL
UPDATE PROPERTY CONTAINER
182
186
ANOTHER TABLE?
NO
CONTINUE

FIG. 10